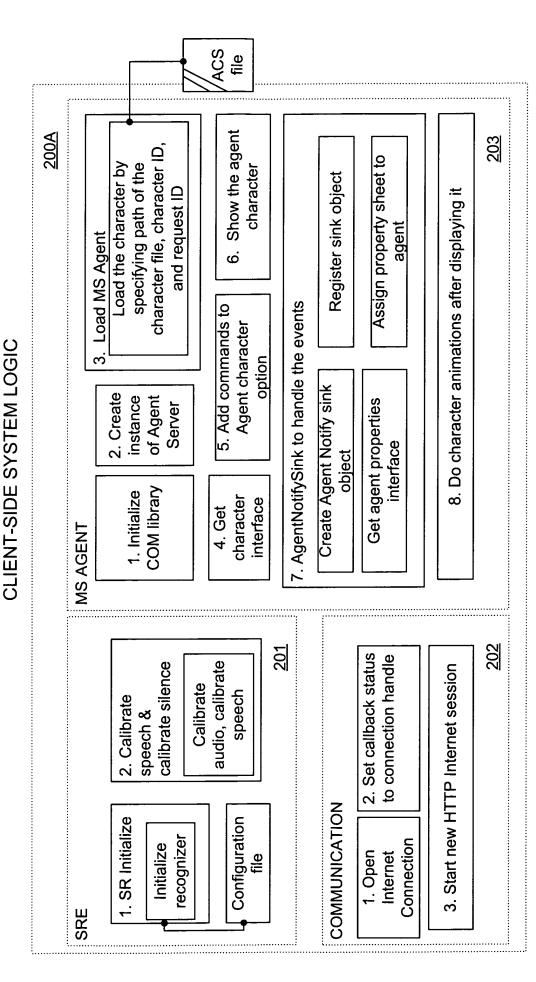
# Replacement Sheet Figure 2 (Page 1/3)

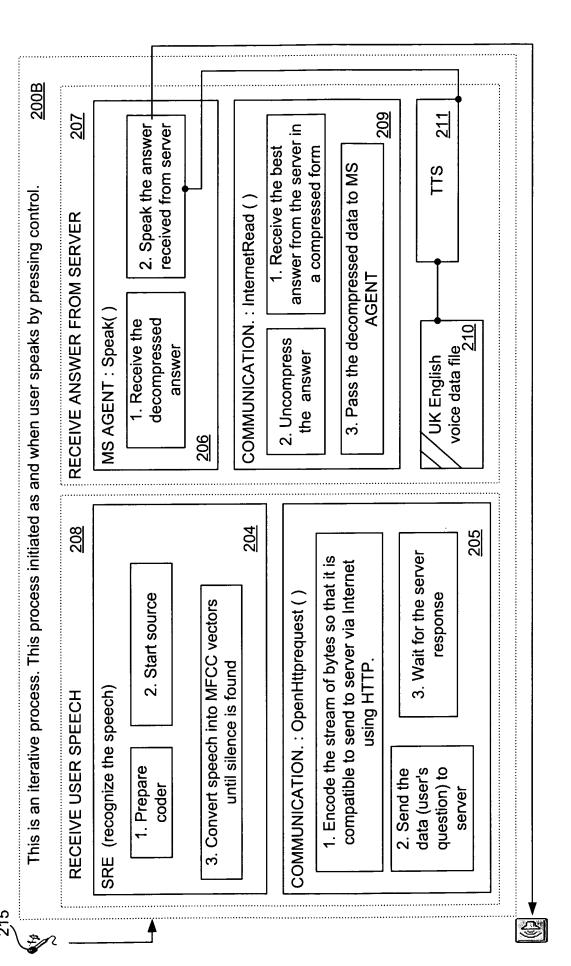






# Replacement Sheet Figure 2 (Page 2/3)

**CLIENT-SIDE SYSTEM LOGIC** 





# Replacement Sheet Figure 2 (Page 3/3)

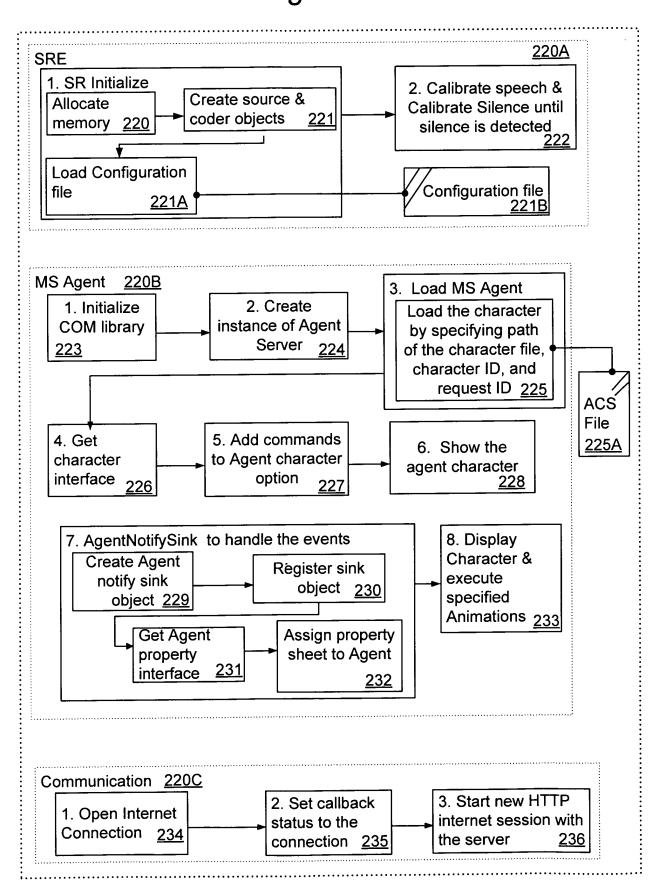
UN-INITIALIZATION (performs as and when user quits i.e. closes the web page)

200C

|                   | 3. Unload<br>agent                               | 6. Unregister<br>Agent Notifysink  | 214  |   |
|-------------------|--|--|--|---|
|                   | 2. Release<br>character<br>Interface             | 5. Release<br>prop. sheet<br>Interface   | 7. Release Agent Interface   | A |
| MS AGENT          | 1. Release<br>commands<br>Interface              | 4. Release<br>AgentNotifysink<br>Interface                                       | 7. Releas  |   |
| COMMUNICATION 213 | 1. Close the Internet handle i.e. the connection | server.  | 2. Close the Internet session which is created at the time of initialization |   |
| SRE <u>212</u>    | a. Delete the objects                            | initialization process b. Deallocate the memory assigned to the structure, which | will be holding the parameters for speech                                    |   |

Replacement Sheet Fig. 2-2 Client-side Initialization

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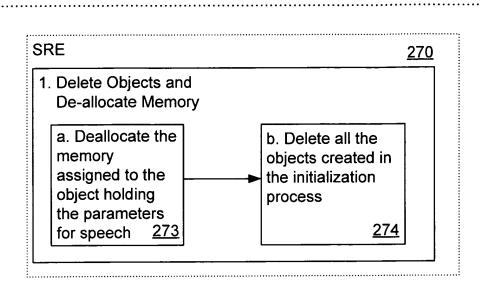


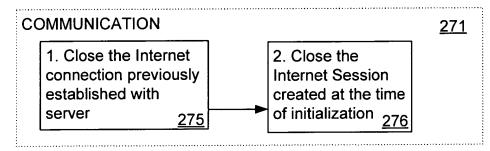
Replacement Sheet Fig. 3 **Encoded** Speech **MFCC** Client-side Iterative Process from User vectors4 Receive User Speech (when User speaks through microphone by clicking on Start button) 240 Communication SRE 1. Encode MFCC 2. Send 2. Start 1. Prepare vectors to make it encoded Source 249 Coder <u>248</u> compatible to data to server<sub>252</sub> send at server using HTTP 251 3. Convert 3. Wait for speech into response from MFCC vectors server <u>250</u> <u> 253</u> <u>241</u> 242 Receive Answer (from Server side) 243 Speak Best 244 **MS AGENT** suitable Answer 1. Receive 2. Articulate the Received Answer uncompressed Answer 254 245 TEXT-TO-SPEECH ENGINE Natural Text-to-Speech Language Voice **Engine** Data File 256 COMMUNICATION 246 3. Pass 1. Receive the Answer to "Best" Answer 2. Uncompress MS Agent from server the Answer (compressed) <u>259</u> <u>260</u>

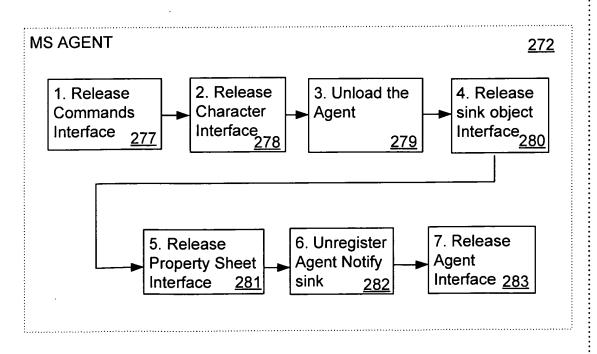
Best Answer from Server

Replacement Sheet Fig. 4
Client-side Un-Initialization

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<u>009</u>

602

hold SRE objects 602C

602F

Load HMM

Allocate memory to

#### Replacement Sheet Fig. 4A

grammar file name 602E 602B 4. UN-INITIALIZE SRE Load Dictionary Create External 604A Delete SRE Source objects Dictionary file name 602A 602D Create SRE Load SRE 2. INITIALIZE SRE 603 objects Library 603B recognize words **Process MFCC** from MFCC vectors to Vectors 3. RECOGNIZE SPEECH 605 course, chapter and Prepare grammar 601 source 603A vectors from Read MFCC section names MFCC vectors and loader file names using external from client .Decode received Note: course-DB name chapter-table name section-table name Chapter & encoded Course, Section MFCC vectors name

Distributed Component of SRE at Server-Side

Recognized speech in the form of text

604

602G

Load Grammar

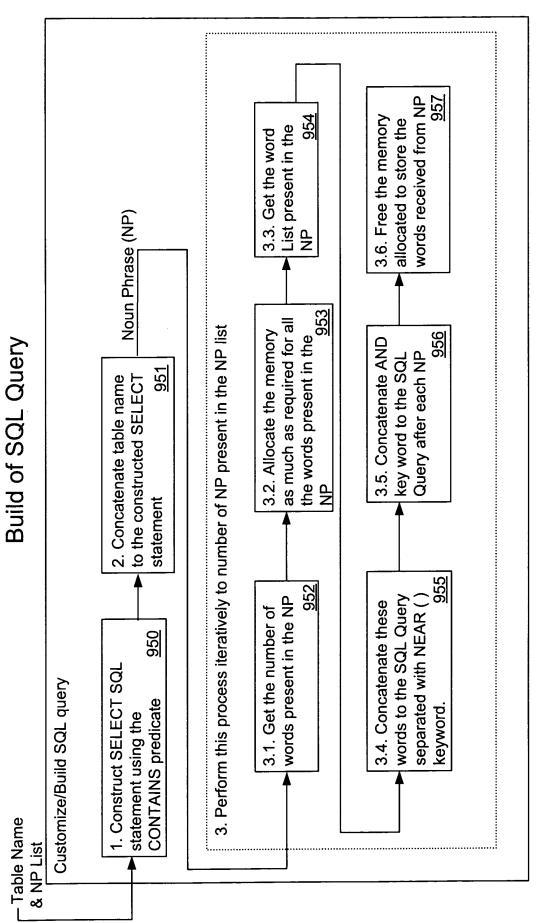
604A

assigned to SRE objects

Deallocate memory



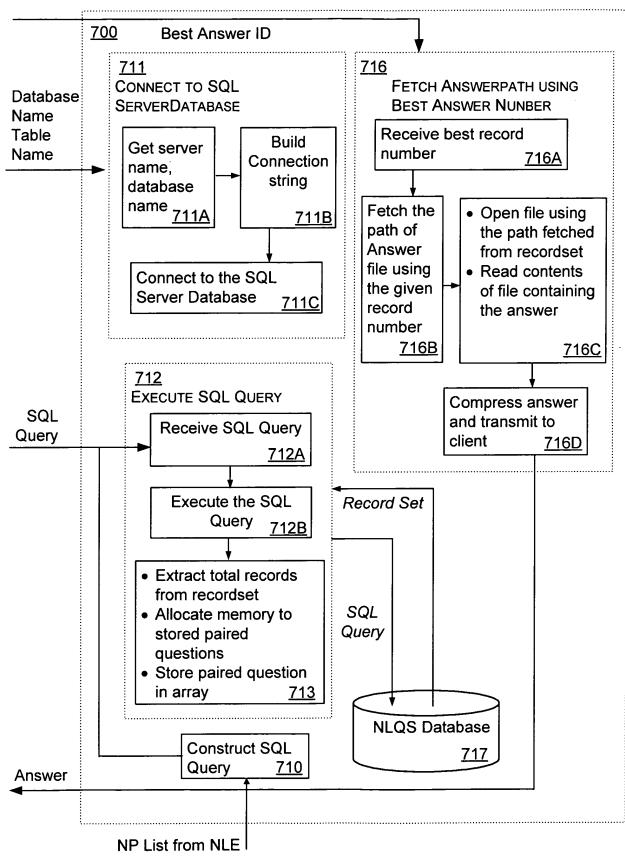
### Replacement Sheet Fig. 4B



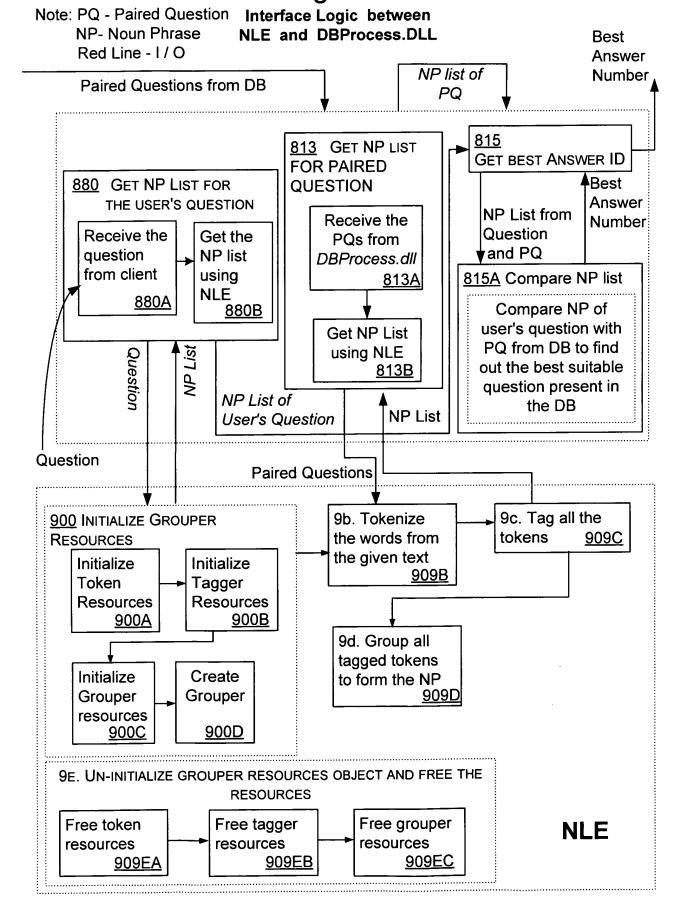
MAR 0 1 2006 Replace

Replacement Sheet Fig. 4C

#### Server-side DBProcess DLL

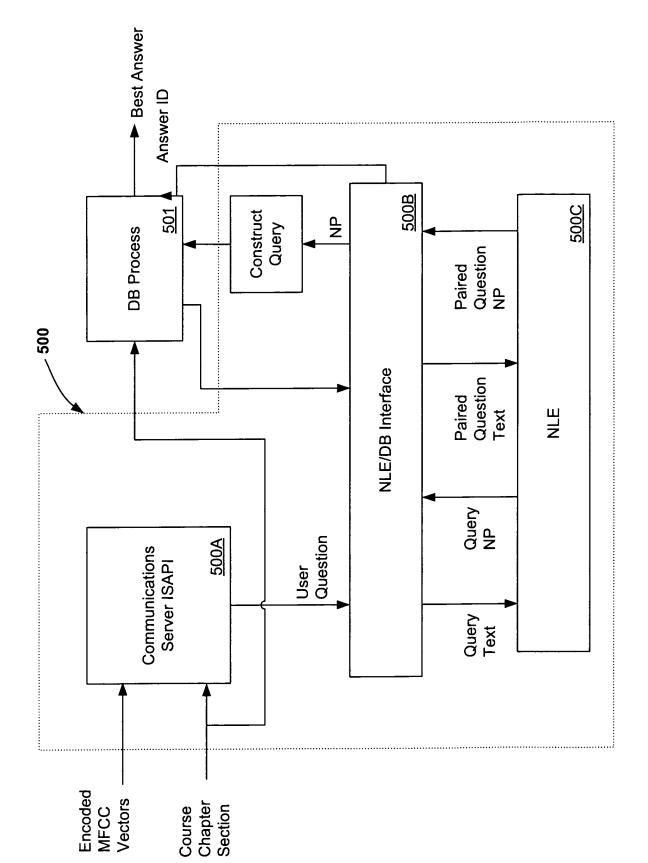


Replacement Sheet Fig. 4D



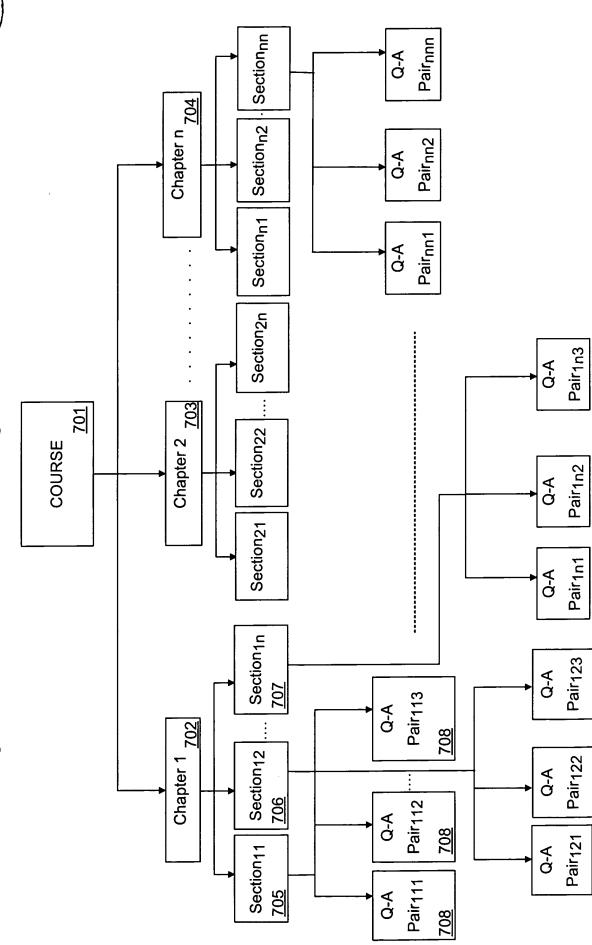


Replacement Sheet Fig. 5





Replacement Sheet Fig. 6





### Replacement Sheet Fig. 7A



### Replacement Sheet Fig. 7B

| FIELD NAME 720           | DATA TYPE 721 | Size<br>722 | NULL<br>723 | PRIMARY KEY | INDEXED?        |
|--------------------------|---------------|-------------|-------------|-------------|-----------------|
| Chapter_ID<br><u>726</u> | Integer       |             |             | Yes         | Yes             |
| Answer_ID 727            | Char          | 2           | No          | UNIQUE      | Yes             |
| Section_Name<br>728      | Varchar       | 255         | No          | UNIQUE      | Yes             |
| Answer_Title             | Varchar       | 255         | Yes         | No          | Yes             |
| PairedQuestion           | Text          | 16          | No          | O.          | Yes (Full-Text) |
| AnswerPath               | Varchar       | 255         | No          | No          | Yes             |
| Creator 732              | Varchar       | 20          | No          | No          | Yes             |
| Date_of_Creation         | Date          |             | No          | ON          | Yes             |
| Date_of_Modification     | Date          | -           | No          | ON          | Yes             |
|                          |               |             |             |             |                 |



### Replacement Sheet Fig. 7C

| Field 720                | Description 735  |
|--------------------------|--|
| AnswerID 727             | An integer - automatically incremented for user convenience  |
| Section_Name 728         | Name of section to which the particular record belongs. This field along with AnswerlD has to be made primary key        |
| Answer_Title 729         | A short description of the answer  |
| PairedQuestion 730       | Contains one or more combinations of questions for the related answer whose path is stored in the next column AnswerPath |
| AnswerPath 731           | Contains the path of text file, which contains theanswer to the rleated qusetions stored in the previous column          |
| Creator 732              | Name of content creator  |
| Date_of_Creation 733     | Date on which content has been added   |
| Date_of_Modification 734 | Date on which content has been changed or modified   |

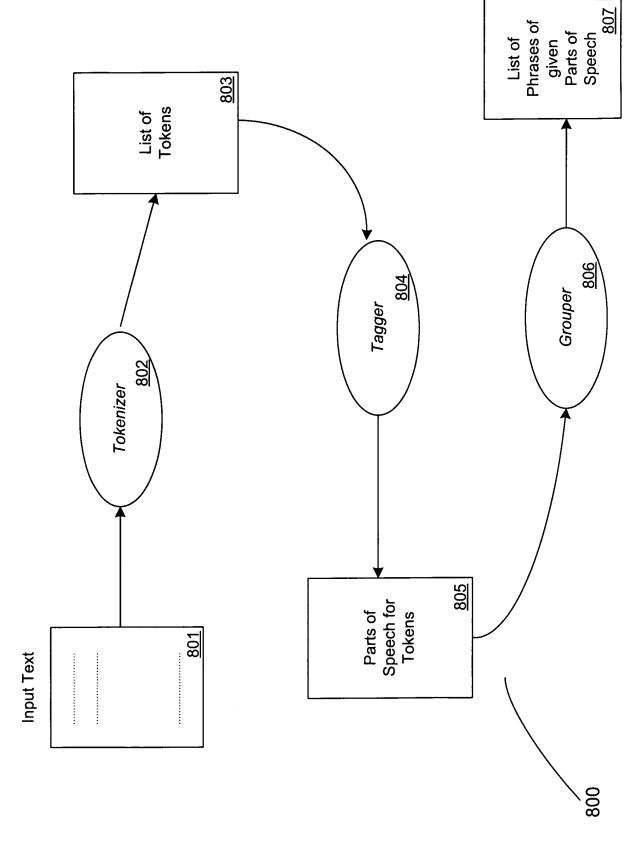


### Replacement Sheet Fig. 7D

| FIELD 740            | DATA TYPE 741 | Size 742 | NULL 743 | PRIMARY<br>KEY 744 | INDEXED 745     |
|----------------------|---------------|----------|----------|--------------------|-----------------|
| Answer_ID 746        | Char          | 5        | No       | Yes                | Yes             |
| Answer_Title 747     | Varchar       | 255      | Yes      | No                 | No              |
| PairedQuestion 748   | Text          | 16       | No       | No                 | Yes (Full-Text) |
| Answer_Path          | Varchar       | 255      | No       | No                 | No              |
| Creator 750          | Varchar       | 20       | No       | ON                 | No              |
| Date_of_Creation     | Date          | •        | No       | No                 | No              |
| Date_of_Modification | Date          | •        | No       | No                 | No              |

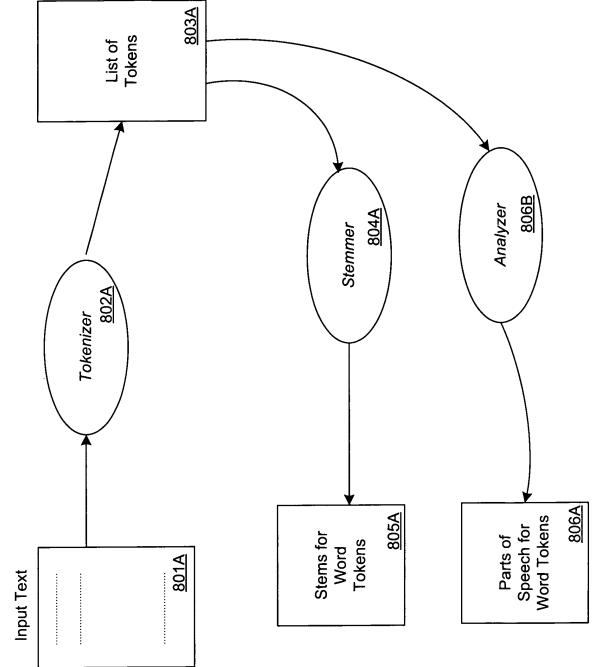


Replacement Sheet Fig. 8



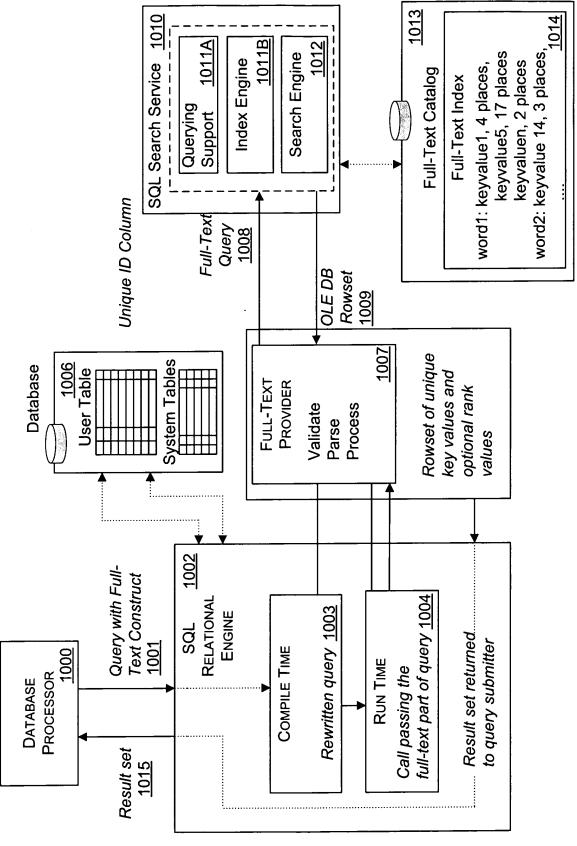


Replacement Sheet Fig. 9



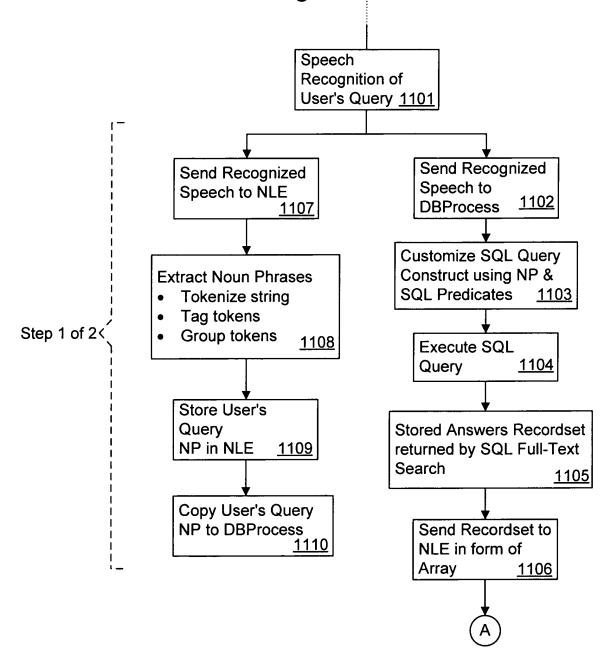


### Replacement Sheet Fig. 10

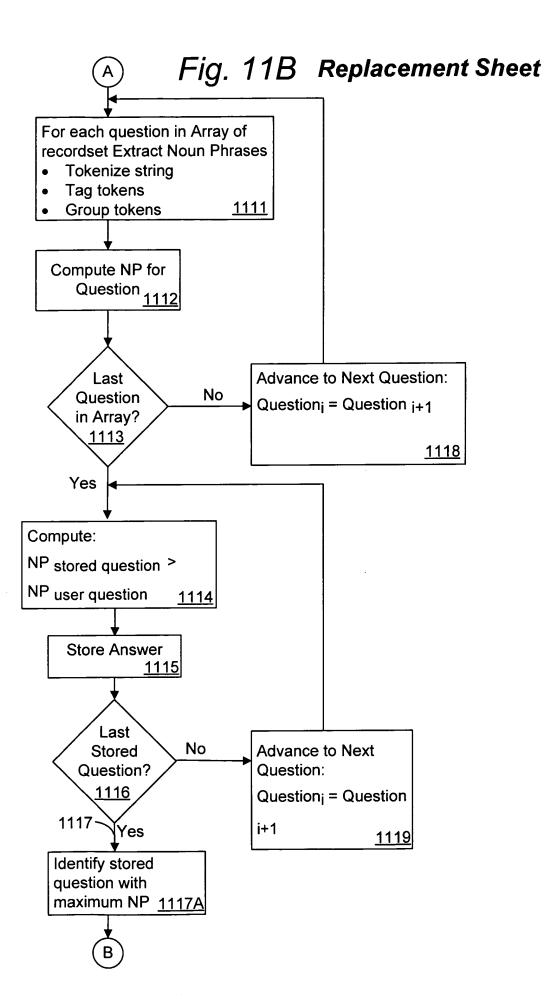


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Replacement Sheet Fig. 11A

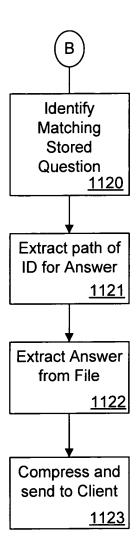


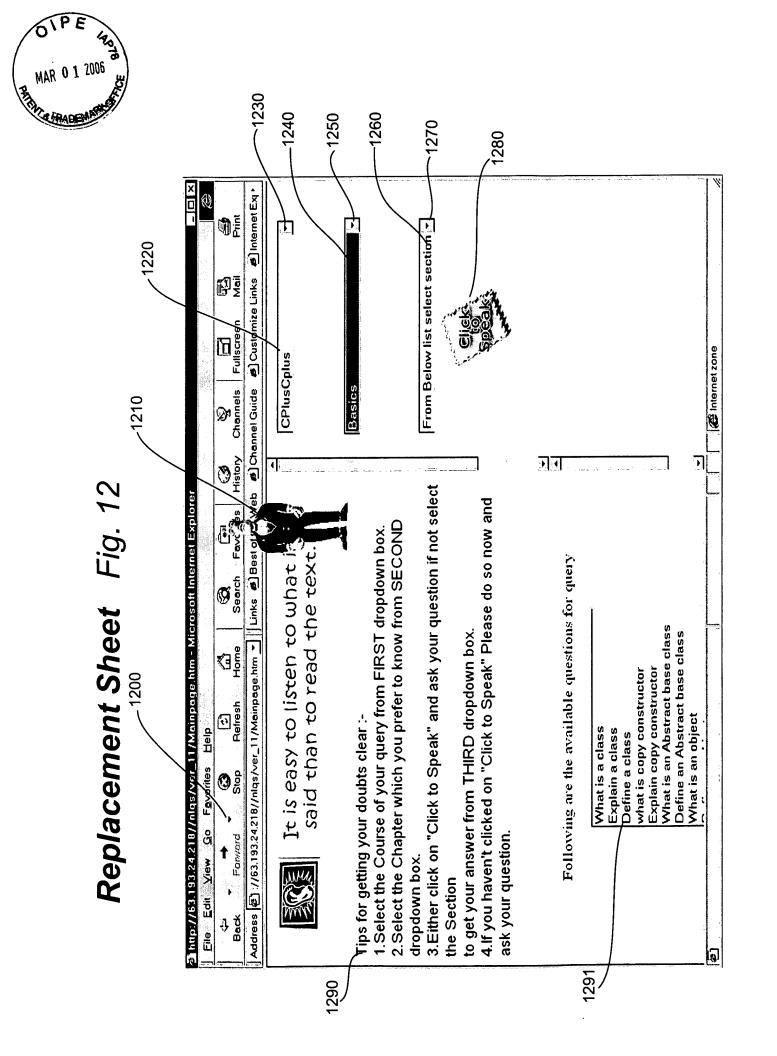




Replacement Sheet Fig. 11C

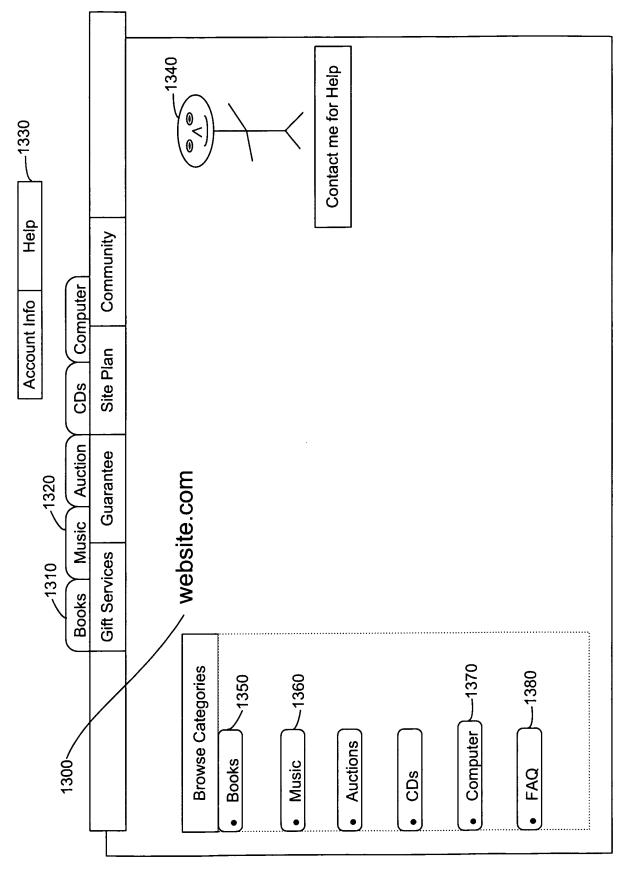
MAR 0 1 2006





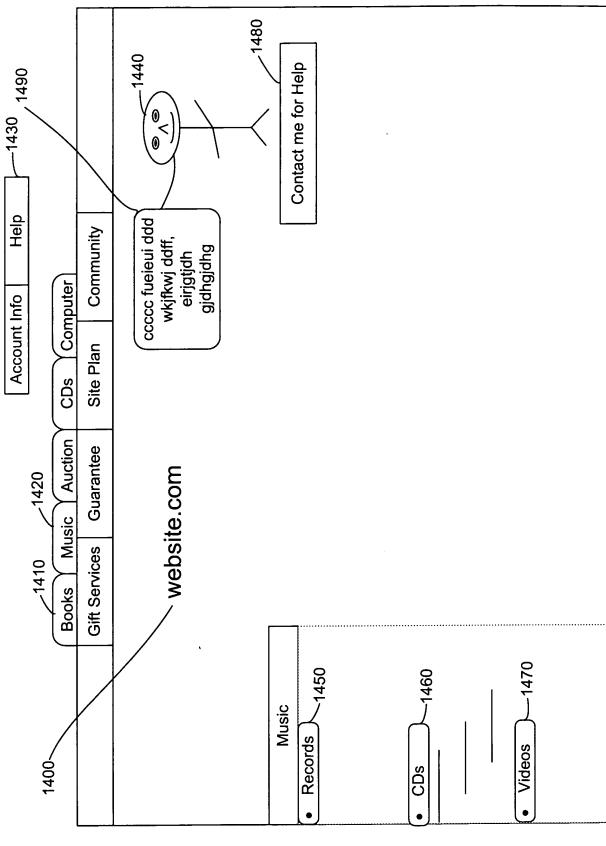


Replacement Sheet Fig. 13



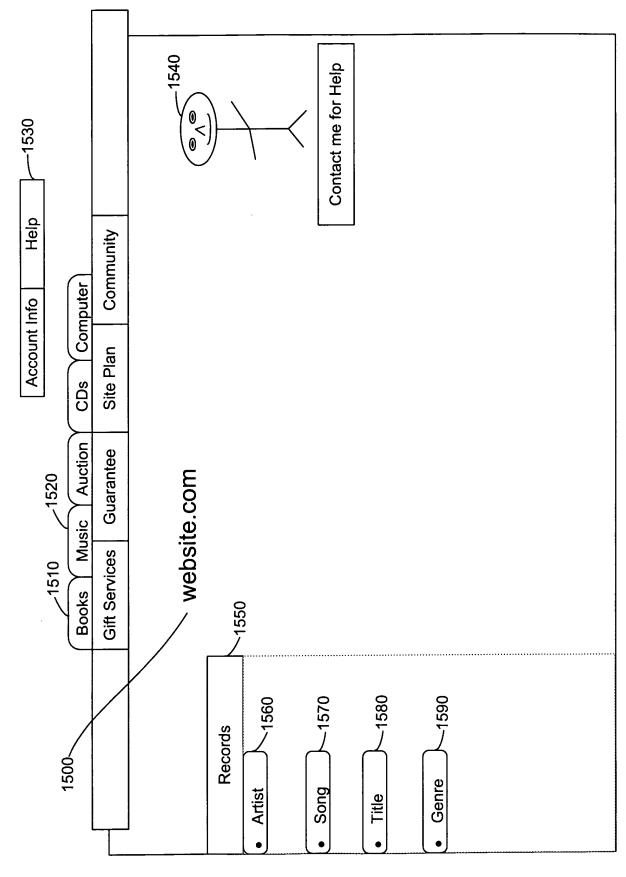


Replacement Sheet Fig. 14



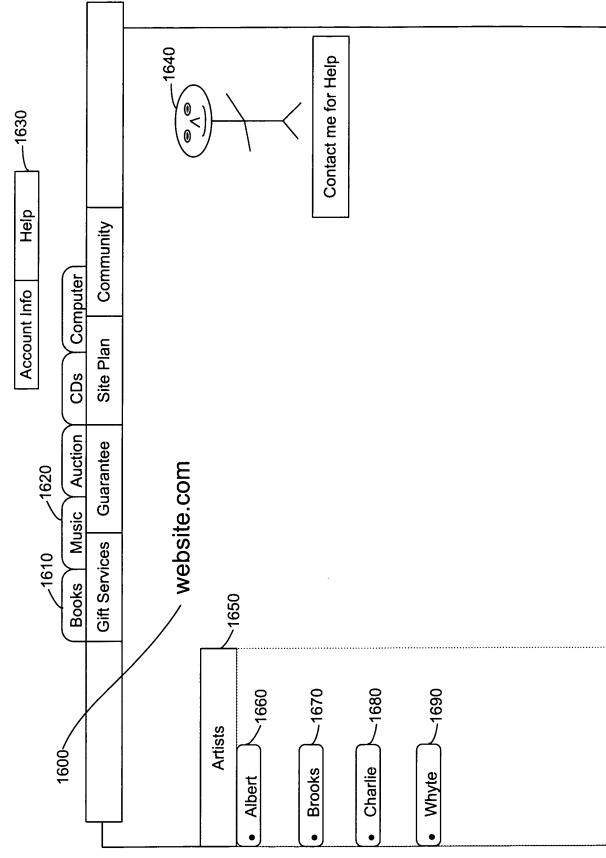


Replacement Sheet Fig. 15



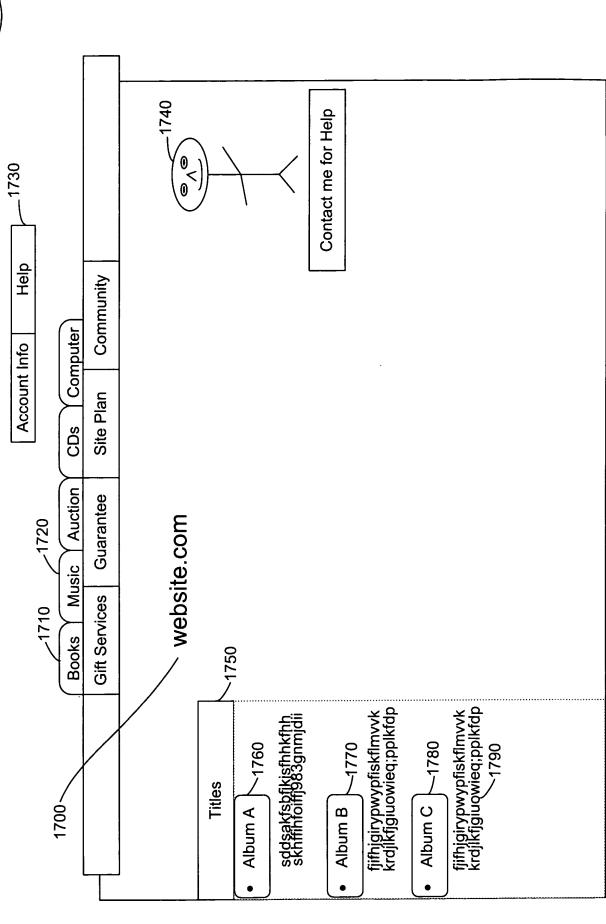


Replacement Sheet Fig. 16



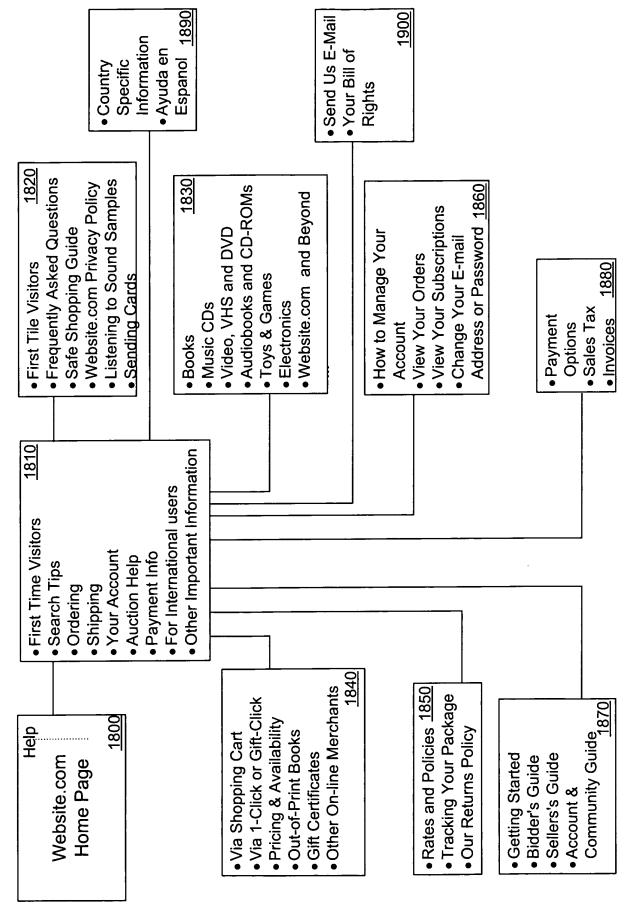


#### Replacement Sheet Fig. 17





## Replacement Sheet Fig. 18 (Page 1/2)





# Replacement Sheet Fig. 18 (Page 2/2)

